



~~August 21, 2007 CPC~~  
October 16, 2007 CPC

STAFF'S  
REQUEST ANALYSIS  
AND  
RECOMMENDATION

07PW0406

Chesterfield County Parks and Recreation  
(Midlothian Middle School – Recreation Site Improvements)

Midlothian Magisterial District  
South line of Midlothian Turnpike

REQUEST: Waiver of Development Standard

Chesterfield County Parks and Recreation requests Planning Commission approval of a Development Standards Waiver to the zoning ordinance requirement that illumination at the property line adjacent to Agricultural (A), Residential-Townhouse (R-TH) and Residential–Multifamily (R-MF) districts be limited to five-tenths (0.5) foot candle per Section 19-508.3 of the Zoning Ordinance.

RECOMMENDATION

Staff recommends approval for the following reasons:

1. The applicant has made a significant effort to reduce the impact of the new lighting to residential property, including the use high quality athletic field light fixtures that provide a very high level of light control.
2. The additional poles and light fixtures are being added to an existing athletic area with a number of older style athletic field light fixtures. Staff believes that the additional illumination will not substantially impact the adjacent residential property.
3. The improvements to the public facilities are consistent with the Midlothian Village Community Plan.

## GENERAL INFORMATION

### Developer:

Chesterfield County Parks and Recreation

### Design Consultant:

Hankins and Anderson

### Location:

Located on the south line of Midlothian Turnpike. Tax ID 729-707-6414 (Sheets 5 & 6).

### Existing Zoning and Land Use:

Residential (R-7) and Community Business (C-3); Public/semi public, (public middle school)

### Size:

28 acres

### Adjacent Zoning & Land Use:

North - C-2; Commercial, Public/semi-public (Fire Station) and vacant  
South - R-TH and R-MF: Residential  
East - C-5 and R-TH; Commercial or vacant  
West - A, C-2 and C-3; Single family residential or commercial

## BACKGROUND

The applicant is proposing to make improvements to the athletic/recreational fields and parking of the school, part of which includes installing two new athletic field poles and light fixtures to improve lighting for the field closest to the adjacent residential property. The applicant is proposing to use high quality athletic field light fixtures with a high degree of light control that will minimize the impact of additional light to the adjacent residences. Mounting height of the light fixtures will be approximately sixty (60) feet which is approximately the same as for the existing athletic field lighting.

Section 19-508.3 of the Zoning Ordinance requires that illumination at the property line adjacent to Agricultural (A), Residential-Townhouse (R-TH) and Residential–Multifamily (R-MF) districts be limited to five-tenths (0.5) foot candle above background.

The existing athletic field lighting is non-conforming with light levels ranging as high as approximately 8.9 foot candles at the property line.

In order to provide acceptable light distribution onto the playing surface, one of the new poles needs to be located on the side adjacent to the residential property. While the new field lighting will exceed the ordinance requirements due to proximity to the residences, the newer type of sports field lighting is significantly more efficient regarding light control. Based upon the light output diagram that is attached, the highest level of additional light at the property line will be approximately 1.3 to 1.7 foot candles above existing. The 0.5 foot candle level for new lighting extends approximately thirty (30) feet into two of the residential properties. Also provided is a summary sheet that shows the estimated total light output from the existing sports field lighting when the new field lighting is added.

Staff believes that a significant effort has been made to minimize any impact due to the additional light sources. However, should Parks and Recreation have the ability to update the older light fixtures to the new fixtures, the lighting toward the residential property may be further reduced.

### CONCLUSIONS

The Zoning Ordinance requires that the Planning Commission make five (5) findings in its determination of development standard waiver requests (see attached). The applicant has submitted justifications for this request.

The applicant is proposing to make improvements to the athletic/recreational fields and parking of the school, part of which includes installing two new light poles and light fixtures to improve lighting for the field closest to the adjacent residential property. Staff recommends approval of the development standards waiver for the reasons noted.

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### CASE HISTORY

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Planning Commission Meeting (8/21/07):

The Planning Commission deferred the case for sixty (60) days, at the applicant's request, to allow time to send additional information to adjacent residential property owners and to respond to any requests.

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Parks and Recreation Staff (8/23/07):

Parks and Recreation Department sent letters to eleven (11) adjacent residential property owners with information about light level increases. Attached is a copy of the letter and light level information.

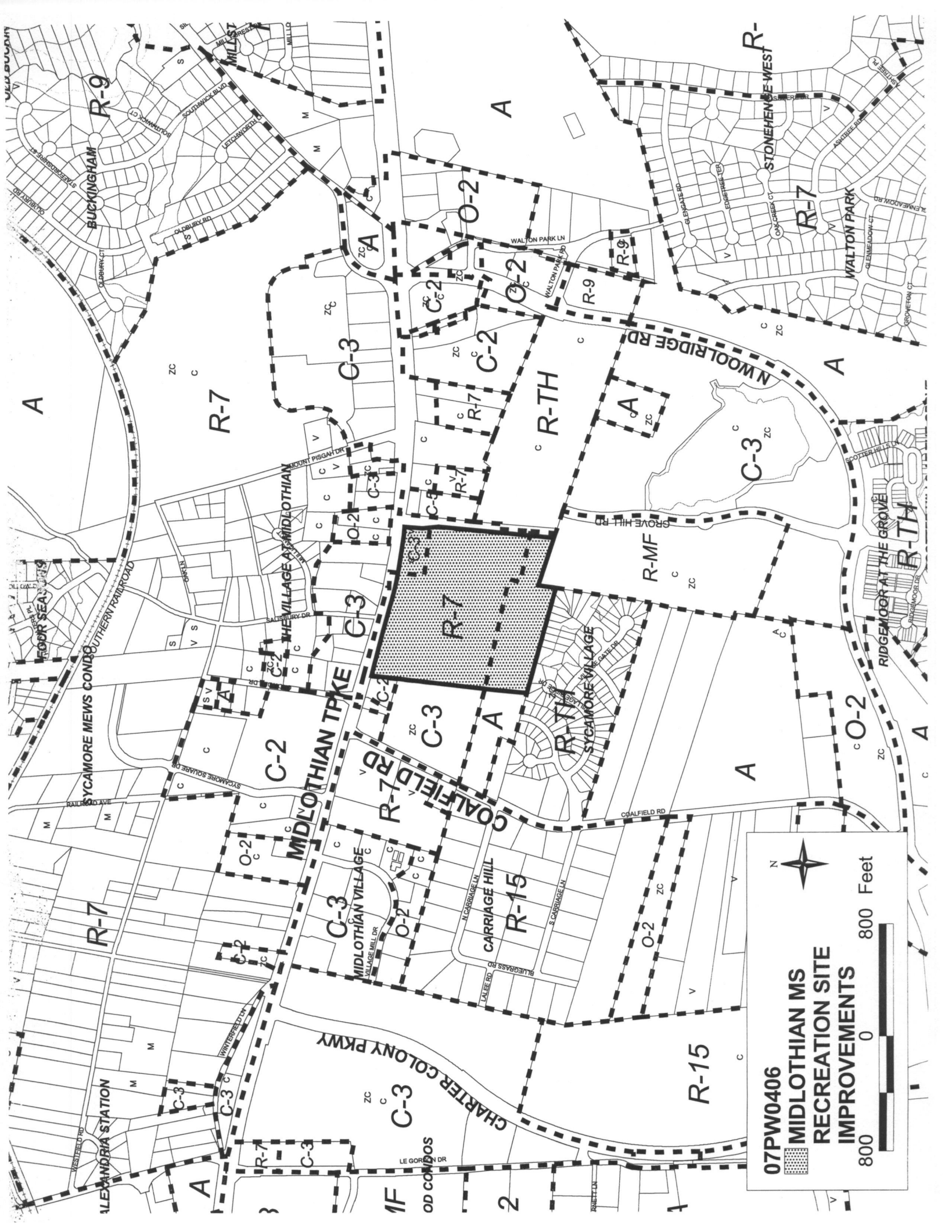
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Staff (9/25/07):

As of this date, Parks and Recreation Department has not received any request for additional information.

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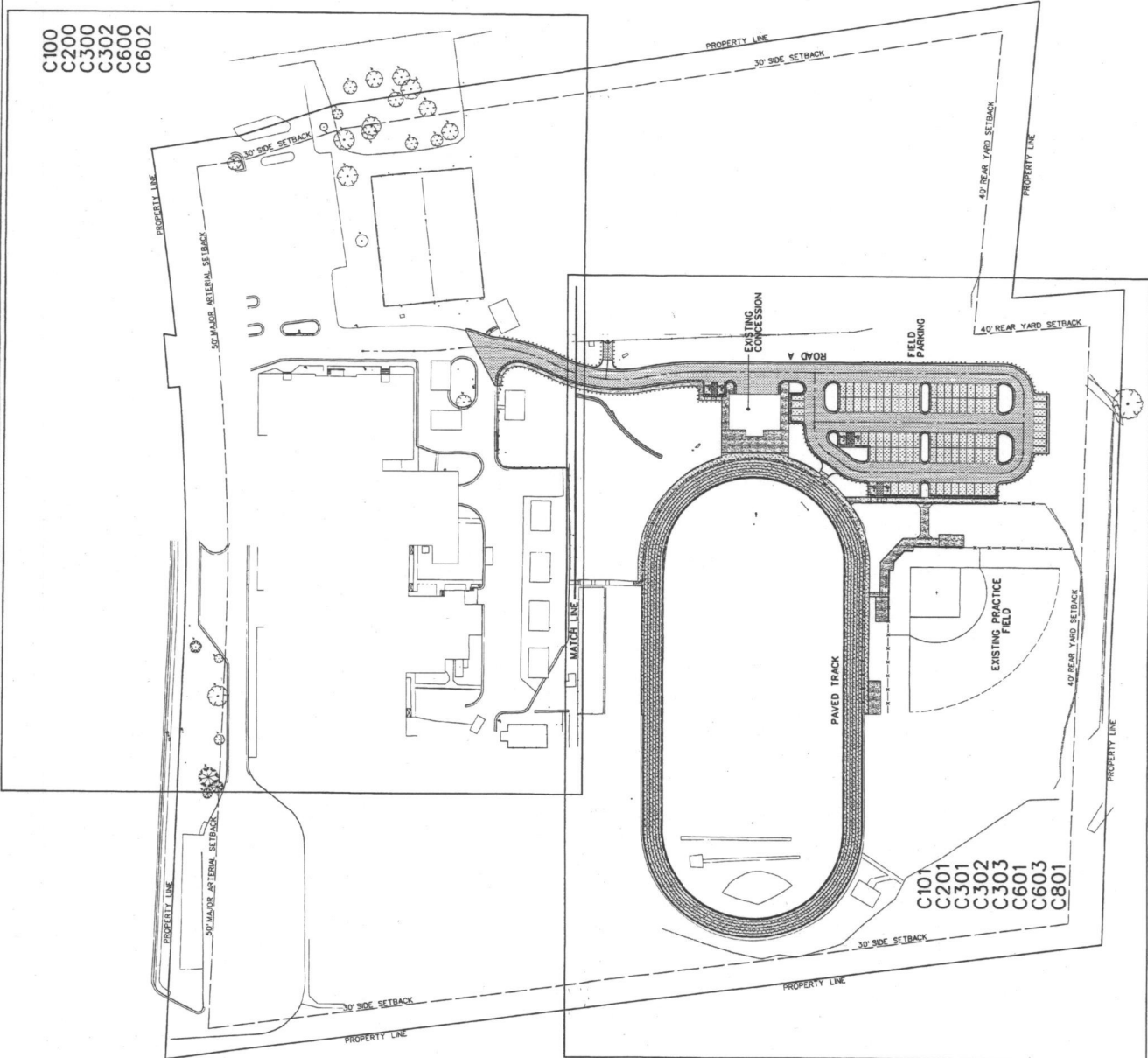
07PW0406  
MIDLOTHIAN MS  
RECREATION SITE  
IMPROVEMENTS

800 0 800 Feet

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GRAPHIC SCALE: 1"=40'  
0 40 80 120



C100  
C200  
C300  
C302  
C600  
C602

C101  
C201  
C301  
C303  
C601  
C603  
C801

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GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Blanket Grid

Chesterfield Midlothian MS Multipurpose  
Midlothian, VA

Blanket Grid

- Grid Spacing = 30.0' x 30.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION

HORIZONTAL FOOTCANDLES

Entire Grid  
No. of Target Points: 256  
Average: 3.9  
Maximum: 29  
Minimum: 0

Average Lamp Tilt Factor: 1.000  
Number of Luminaires: 8  
Avg KW over 5000 hours: 12.51  
Max KW: 13.6

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

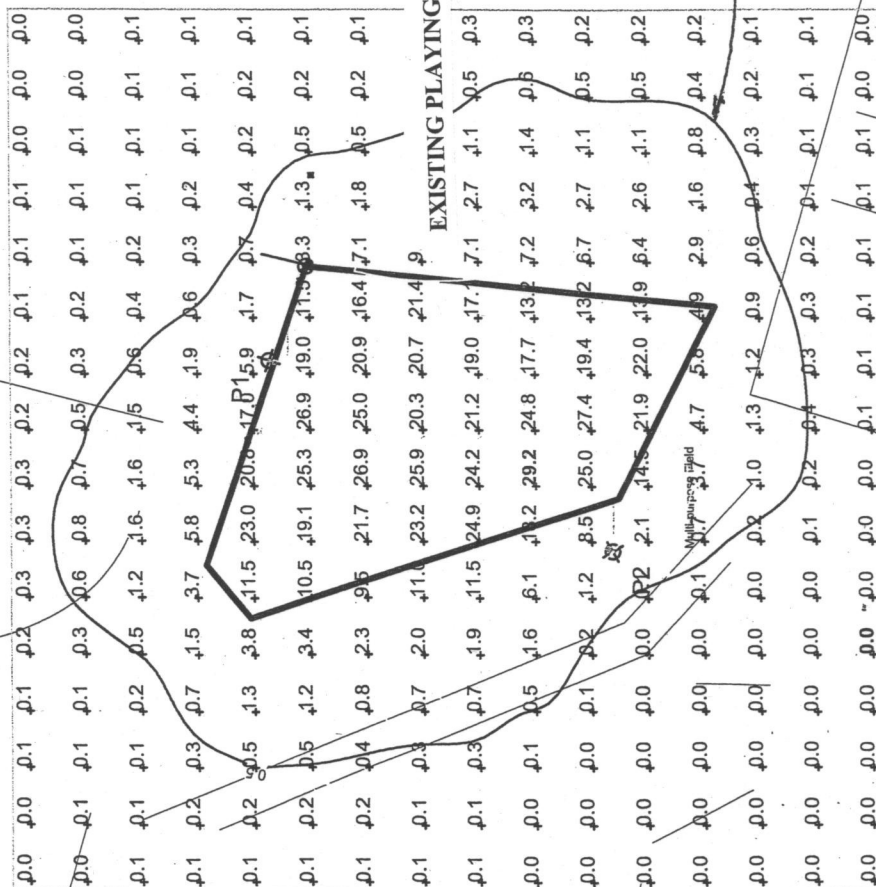
Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Requirements: Refer to Amperage requirements in the "Musco Control System Summary"

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

| EQUIPMENT LIST FOR AREAS SHOWN |          |      |                 |                 |           |          |           |             |
|--------------------------------|----------|------|-----------------|-----------------|-----------|----------|-----------|-------------|
| Pole                           |          |      | Luminaires      |                 |           |          |           |             |
| QTY                            | LOCATION | SIZE | GRADE ELEVATION | MOUNTING HEIGHT | LAMP TYPE | QTY/POLE | THIS GRID | OTHER GRIDS |
| 1                              | P1       | 60'  | -               | 60'             | 1500W MZ  | 3        | 0         | 0           |
| 1                              | P2       | 60'  | -               | 60'             | 1500W MZ  | 5        | 5         | 0           |
| TOTALS                         |          |      |                 |                 |           |          | 8         | 5           |

EXISTING TRACK & FIELD



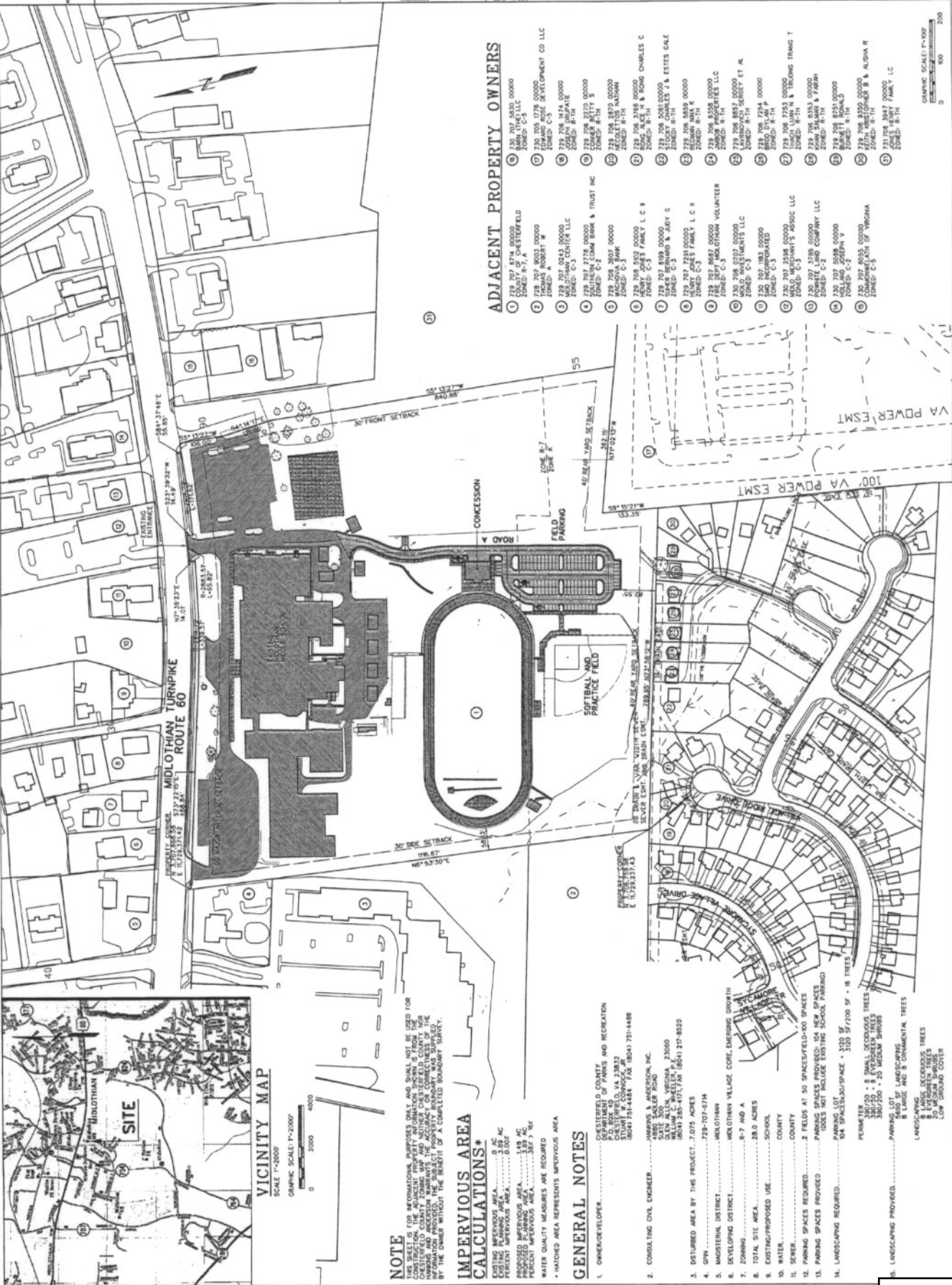
- RESIDENTIAL PROPERTY

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July 3, 2007

Chesterfield County Planning Department  
P.O. Box 40  
Chesterfield, VA 23832

Re: Midlothian Middle School – New Parking  
Development Standards Waiver  
3979-45

To Whom It May Concern:

On behalf of Chesterfield County Department of Parks and Recreation, we are requesting a Development Standards Waiver to Section 19-508.3 of the Chesterfield County Zoning Ordinance. The development planned for Midlothian Middle School includes constructing a new parking lot and lighting of an existing softball practice field. We would like to add new athletic field sports lighting to the existing practice field. As noted below, we meet the five factors for a Development Standards Waiver outlined in Section 19-19.

1. The existing depth of the available property creates a hardship that does not permit us to meet the 0.5 foot candle limit. We are unable to move the lights farther away from the property line to maintain a zero light level increase. We considered locating the light poles on the southern side of the field, but the resultant light levels within the field were uneven and thus did not meet the sports lighting requirements for a playable field. We considered moving the field, but due to the location of the existing track the field could not be moved further away from the property line.
2. The requirement does not create an undue hardship that is shared by the surrounding property. The property to the north, east, west is commercial property. The property to the south is residential property. These properties are not for public use, such as a school, and thus do not require sports lighting. The school provides public fields that typically are lighted to permit the field to be used in the evening.

3. Authorizing the waiver to Section 19-508.3 will not substantially detriment the adjacent properties or character of the district because the proposed increase in the lighting levels is limited and does not change the existing lighting levels excessively. We measured the existing light levels along the property line, as shown on Sketch SK-2, and found the existing light levels to exceed the 0.5 foot candle limit by more than 8.9 foot candles at the brightest location. The proposed design will result in the light levels to remain high, but we will be increasing the levels by no more than 0.09 foot candles at the brightest point.
4. The request for the waiver does not constitute a condition general enough to warrant an amendment to Chapter 19 of the Chesterfield County Zoning Ordinance. The fields at most school sites are further away from residential property lines and the existing lighting at the property line is low. This site is unique since the available field is close to the property line.
5. Granting of this waiver will allow the property to comply with the comprehensive plan because the school site is a public use and is supported by the recreation facilities. Lighting the field will enhance the use, therefore better complying with the comprehensive plan.

Based on the above information, we feel that a waiver for this situation is justified.

If you have any questions regarding our request, please do not hesitate to call me at 285-4171.

Very truly yours,

HANKINS AND ANDERSON, INC.



William C. Wheeler, P.E.  
Associate  
LEED AP  
Civil

cc: Stuart Connock, Jr.  
Enclosed: Property Line Lighting Levels for 20 foot and Sports light poles, Lighting Level Calculations, Light Cut Sheets, Site Plan



**Chesterfield County, Virginia**  
**Parks and Recreation Department**

Phone: (804) 748-1623 – Fax: (804) 751-4131 – Internet: [chesterfield.gov](http://chesterfield.gov)  
6801 Mimms Loop – P.O. Box 40 – Chesterfield, VA 23832

**Mike Golden**  
**Director**

August 23, 2007

**Re: Midlothian Middle School  
Recreational Improvements Youth Ballfield  
Renovation to Athletic Lighting**

**Subject: Chesterfield County Planning Commission  
Case #: 07PW0406  
Development Standards Waiver  
Light Levels at Residential Property Line**

Dear Ms.

Chesterfield County Parks and Recreation operates a youth recreation complex at Midlothian Middle School. We have a high demand for additional youth football and soccer practice time under the lights. We are currently developing plans to improve the existing recreation facilities as part of the Bond Referendum passed by County citizens in the fall of 2004. One portion of this improvement plan is to add additional lighting to the outfield of the existing lighted softball/baseball field at the southern edge of the school property.

This additional lighting will slightly increase the lighting levels at the property line behind your residential property. This increase combined with the existing lighting levels will exceed the current zoning ordinance limit. To allow this lighting to occur, the Department of Parks and Recreation has filed a Development Standards Waiver with the Chesterfield County Planning Commission, Case # 07PW0406, which will be considered by the Planning Commission on Tuesday, October 16, 2007. This case was deferred, by request of the Parks and Recreation Department, on the original public hearing dates of August 21, 2007, to allow more time for public input. The public notice appears below:

**07PW0406: In Midlothian Magisterial District, CHESTERFIELD COUNTY PARKS AND RECREATION** requests Planning Commission approval of a waiver of development standards to the Zoning Ordinance requirement that illumination at the property line adjacent to Agricultural (A), Residential Townhouse (R-TH) and Residential Multi-Family (R-MF) Districts

August 23, 2007

**Re: Midlothian Middle School  
Recreational Improvements Youth Ballfield  
Renovation to Athletic Lighting**  
**Subj: Chesterfield County Planning Commission  
Case #: 07PW0406  
Development Standards Waiver  
Light Levels at Residential Property Line**

be limited to five-tenths (0.5) foot candle. This project is commonly known as **Midlothian Middle School Recreation Site Improvements**. This request lies in Agricultural (A), Residential (R-7) and Community Business (C-3) Districts on a 28 acre parcel fronting approximately 775 feet on the south line of Midlothian Turnpike. Tax ID 729-707-6714 (Sheets 5 & 6). The information of this case is also found at:

<http://www.co.chesterfield.va.us/CommunityDevelopment/Planning/CPCAgenda/CPC08-21-07Ag.asp>

You have been notified of our case, as your property is affected by the proposed additional athletic lighting to the athletic field. Attached please find a map showing the light level increase, as a result of the proposed lighting, measured in foot candles. Example lighting levels in foot candles, to give you a reference scale, are as follows:

Moonlight 0.01 f.c  
Candle 1 f.c

We believe that the increase would be very small, but we would like to discuss any concerns that you might have.

Should you require additional information, have comments, or concerns, please contact me at your earliest convenience (by phone (804) 751-4484, by FAX (804) 751-4486, or by e-mail at [connocks@chesterfield.gov](mailto:connocks@chesterfield.gov)).

The Planning Commission Meeting is open to the public and you may attend the meeting on October 16, 2007, when the case # 07PW0406 will be heard to address our development waiver request.

Sincerely,

Stuart W. Connock, Jr.  
Chief of Parks  
Design and Construction

Attachment(s): Map Showing Field Location and Light Level increase

pc: Mike Golden, Director  
File



EXISTING  
LIGHTED  
BALLFIELD

13501

INCREASED LIGHT LEVELS  
1.74 0.97 0.21 0.25 0.15 0.09 0.06 0.04 0.03 0.02 0.01 0.01

INCREASED LIGHT LEVELS 50' INSIDE THE PROPERTY LINE  
0.4 0.2 0.15 0.1 0.1 0.05 0.01

13601

13631

13643

13649

13655

13667

13625

1361

13613

13607

419

413

407

401

DR

13600

13613

MIDLOTHIAN MIDDLE SCHOOL - PROPOSED LIGHTING LEVEL INCREASES TO  
ADJACENT RESIDENTIAL - CASE #07PW0406